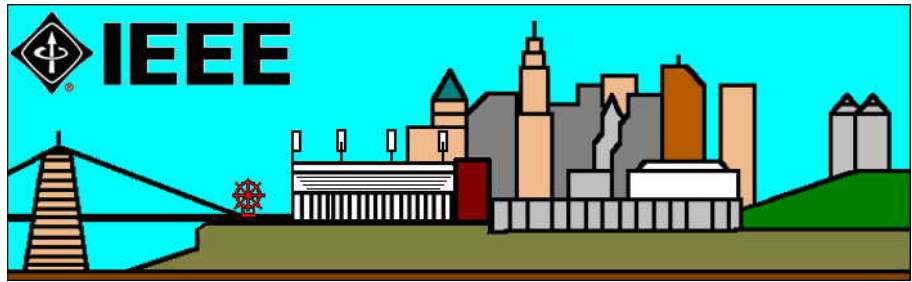


**IEEE CINCINNATI
SECTION
NEWSLETTER
SEPTEMBER 2004**



SEPTEMBER MEETING BROADBAND OVER POWER LINES (BPL)

DATE: Thursday, September 23, 2004

PLACE : Raffel's – 10160 Reading Road (see below for directions)

TIME : 5:30 p.m. to 7:00 p.m. - Social Time/Dinner
7:00 p.m. to 8:30 p.m. - Program

COST FOR DINNER: \$10.00 for Student Members
\$15.00 for Members
\$20.00 for Non-Members

MENU SELECTIONS: Country Fried Chicken, Spaghetti with Meatballs, Meatloaf served in Brown Gravy, Whipped Potatoes, Succotash, Caesar Salad, Fresh Fruit Salad, Buttermilk Biscuits, Apple Dumplings, Coffee, Tea Iced Tea, Soft Drinks. There is also a bar available for the purchase of alcoholic drinks. Raffel's is located at 10160 Reading Road, south of Glendale-Milford Road on the east side of Reading. Take I-75 to the Glendale-Milford Rd. Exit, go east on Glendale-Milford Road approximately 3/4 of a mile to Reading Rd. and turn right on Reading.

Please call the Cincinnati Section Voice Mailbox at **513-629-9380**, by **Noon, Tuesday, Sept. 21, 2004** if you plan to attend. Please leave your Name, IEEE Member Number, and a daytime telephone number. You can also make a reservation by e-mailing our Arrangements Chair, Charlie Nash, at cnash@ieee.org.

ABOUT THE PRESENTATION: Broadband over Power Lines (BPL) has emerged as an exciting development in communications. This technology uses the existing electricity distribution infrastructure to provide broadband access to homes and businesses. Cinergy started a venture this spring to provide BPL service to its customers in the Cincinnati area. Jim Mollenkopf from Current Technologies, the manufacturer of the equipment used in the new Cinergy venture, will address key facets of this technology, including an overview of the powerline communications channel and how channel impairments are mitigated. Network architecture and performance tradeoffs will be discussed, as well as how this technology integrates with power system operations.

ABOUT THE SPEAKER: Jim Mollenkopf serves as the Vice President, Architecture and Products at Current Technologies, a leading developer of broadband over power line systems. In this role he is responsible for systems architecture, network performance and planning, product management, key technology development, and regulatory compliance. Prior to joining Current at its founding in 2000, he worked at Orbital Sciences where he led the communications system design team for the Orbcomm space segment. Prior to joining Orbital, he served for 11 years with the US Government in a variety of technology development positions.

by Fred Nadeau, Section Chair

Welcome back to the Cincinnati Section after a nice summer vacation. The Executive Committee is currently arranging our fall and winter technical meeting program and if you have a specific topic you wish us to consider, please email me or our Vice Chair, Professor Jim Everly. We will also be electing new officers for the upcoming year, 2005. If you or someone you know would like to be considered for one of our officer positions, please let us know this month so we can place names on the ballot

Remember, our mission is to serve the Section membership and the Societies that our members are part of. It is our goal to provide knowledge of new and emerging technologies that allow our members to maintain competitiveness and competency in their field.

Thank you for your support and continue to come to our meetings each month.

Fred Nadeau, Section Chair
E-mail: f.nadeau@ieee.org
Phone No. 937-289-2800

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Rachel E. Andre	Chad M. Gibson	Rhonda R. Myers
Fred S. Annexstein	Todd S. Grimes	Shruthi Narayanan
Aravind C. Appaswamy	Timothy A. Harrington	Wesley H. Needham
Hannah Ballou	Karl Hart	Michael L. Parker
Andrew Best	John D. Hawkinson	Krishnan V. Parthasarathy
George Brunemann	Jonah Horowitz	Aryanto Putera
Robert D. Butterfield	Bijoy S. Kalloor	Jason P. Roehm
Bedri A. Cetiner	Kenneth Keilholz	Zachery T. Rutledge
Chi-Hao Cheng	Asd A. Kiia	Frank E. Sauser
Nicholas L. Cherney III	James Kinne	Rick L. Siekmann
Leslie W. Cheu	Michael J. Korte	Svetlana Strunjas
Nathaniel Dean	Dhananjay Lal	Heather R., Sullens
Phillippe Debray	Darren M. Landoll	Jonathon M. Taylor
Lyall J. Di Trapani	Henry A. Larrymore	Martin E. Wietlisbach, Jr.
Timothy G. Dietz	Theodore Longshore	Fred W. Wolfinger, Jr.
Wayne Dillender	Wesley Maine	Younghwan Yoo
Luke C. Dininger	Troy D. Martin	Matthew B. Younce
Michael P. Doyle	William C. Mastin	Xiaoshan Zhu
Charles Dragga	Jackie May	Zhiwei Zou
Phil Englert	Justin F. McDowell	
Andrea M. Feldman	William A. Miller	

We wish to welcome these new members to our Section!!!



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- Product Manager — Meter Systems Division
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- Research Engineer — Power Emphasis
- SELU Power Protection Instructor
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Scanning the Past: A History of Electrical Engineering from the Past

Submitted by Dick Reiman, Historian

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George C. Southworth

Fifty years ago this month, the PROCEEDINGS OF THE IRE (Institute of Radio Engineers) included a paper on microwaves by George Southworth of the Bell Telephone Laboratories. He had pioneered in the use of hollow-pipe waveguides for the transmission of microwaves, which, at the time of his 1943 paper, were enjoying extensive use in radar systems. Because of wartime secrecy, he did not provide specific details on current military applications of microwaves, but he noted that among current trends "perhaps none has been more spectacular than that toward the higher frequencies." He observed that the high-frequency frontier had "surged forward almost as a flood." Southworth pointed out that microwaves made it possible to employ antennas of great directivity and to transmit information over long distances using microwave relay towers. Alternatively, he noted that long waveguide systems might be used although he thought it was too early to tell which system would win out. He concluded that a radical new technology involving microwaves was emerging which would provide new challenges and opportunities for electrical engineers.

Southworth was born in Little Cooley, Pennsylvania, in 1890 and became interested in radio while still in high school. He graduated with a degree in physics from Grove City College in 1914 and then studied for a year at Columbia University. In June 1917 he joined the Radio Section of the U.S. National Bureau of Standards and assisted in the preparation of the influential Bulletin 74 entitled Radio Instruments and Measurements, published in 1918. In September 1918 he went to Yale University to teach in a Signal Corps training school for Army officers and he remained on at Yale to complete a doctorate in 1923. His doctoral thesis was on the measurement of the dielectric constant of water at frequencies above 15 MHz.

Since he already had a family to support, Southworth decided to give up his teaching position at Yale in favor of a higher-paying job with the American Telephone and Telegraph Company. Initially he was assigned to assist the editor of the Bell System Technical Journal, but was transferred to the Department of Development and Research to do research on shortwave radio propagation. In 1931 he began a study of wave propagation in dielectric rods, although the project did not yet have official authorization. By early 1932, he observed wave propagation in a water-filled copper pipe. Theoretical analysis related to Southworth's experiments was carried out by John R. Carson, Sergei A. Schelkunoff, and Sallie P. Mead during 1932.

Using high-frequency vacuum tubes imported from France, Southworth transmitted waves through air-filled copper pipes up to 20 feet long by May 1933. He later recalled that the first message sent through a waveguide was "Send money." After he demonstrated the waveguide to his superiors in July 1933, he received authorization to construct a 5-in.-diameter guide with a length of 875 ft for further tests. In 1934 Southworth and his waveguide project were moved to the Bell Telephone Laboratories, and he relocated to Holmdel, New Jersey. He directed a small team of two other engineers and a technician over the next four years in the development of waveguide technology, including instrumentation. He presented an IRE paper on his work on waveguides in April 1936 and it was published in the PROCEEDINGS in July 1937.

Southworth received the Morris N. Liebmann award from the IRE in 1938 and the IEEE Medal of Honor in 1963. In 1950 he published a book entitled Principles and Applications of Waveguide Transmission. He retired from the Bell Laboratories in 1955 although he continued to do consulting work. His autobiography, Forty years of Radio Research, was published in 1962. He received about thirty U.S. patents during his career. He died in 1972 at the age of 81.

James E. Brittain

School of History, Technology, and Society, Georgia Institute of Technology

College of Applied Sciences Selects Winners of 2004 Senior Designs

On May 21, 2004, the following were selected as the winners of the CAS 2004 Student Designs Projects:

Fred Stevens (First Place)
Chris Gruber (Second Place)
Dennis Stewart (Third Place)

The Cincinnati Section would like to extend its congratulations on a fine effort by these and all of the Seniors who participated.

IEEE NEWS

IEEE-USA Encourages FCC to Explore Cognitive Radio to Ease Radio Spectrum Demand

WASHINGTON (May 19, 2004) - Because more products are using wireless communications, demand for finite radio spectrum is increasing. IEEE-USA, in a filing with the Federal Communications Commission (FCC) earlier this month, encourages exploring the potential of cognitive radio (CR) to facilitate the sharing of unused or under-used spectrum.

IEEE-USA believes CR shows great potential for allowing different types of radios to share frequencies on a non-interfering basis. This emerging technology can "sense" the radio environment and location, and adjust parameters to utilize available spectrum. Among the techniques being developed are methods for avoiding interruptions and conflicts between users, such as adjusting power, frequency and modulation.

Among IEEE-USA's recommendations to the FCC are: determining in which frequency bands CR can be used effectively, and validating those selections through initial field trials; confirming CR's reliability and practicality by resolving technical issues; creating a regulatory environment that permits CR technology implementation, and providing a conflict-resolution framework for instances where interference might occur; as well as fostering a healthy environment for compatible, interoperable CR implementation by considering the work of industry-standards bodies that are developing CR standards.

According to IEEE-USA, CR research must establish priorities for those sharing a given band so conflicts won't arise when users attempt to utilize the same spectrum simultaneously. Researchers must also determine which bands are best suited for this new technology, while also ensuring CRs don't create interference for others.

IEEE-USA's May 4 filing (<http://www.ieeeusa.org/forum/POLICY/2004/050304b.pdf>) is based on an earlier position statement, "Improving Spectrum Usage Through Cognitive Radio Technology," available at <http://www.ieeeusa.org/forum/POSITIONS/cognitiveradio.html>

NEWS FROM IEEE EDUCATIONAL ACTIVITIES AND THE HISTORY CENTER (4th Quarter 2004)

MESSAGE FROM MARIO GONZALEZ, CHAIR, IEEE/EAB ACCREDITATION POLICY COUNCIL

Dear IEEE Colleagues,

Accreditation plays an important role in the improvement of the quality of engineering education. My purpose in sending you this note in my role as chair of the IEEE/EAB Accreditation Policy Council is twofold. The first

is to highlight the importance of the key component in the accreditation process: the program evaluators who visit campuses as part of a team and provide recommended accreditation actions to ABET. The second is to provide a reference if you are interested in becoming a program evaluator. You can find information about the entire accreditation process at the IEEE accreditation web site: http://www.ieee.org/organizations/eab/apc/accreditation_ieee.htm

ABET and IEEE strive to produce an even split in the representation of evaluators who participate in accreditation visits: half from academe, and half from industry and government. Information about the application deadline and about how to apply to become a program evaluator is available at <http://www.ieee.org/organizations/eab/apc/ctaa/tacinfo.htm>. The deadline for 2005 is November 15, 2004. For questions about accreditation or to indicate your interest in becoming a program evaluator, please contact eab-accred@ieee.org.

Mario Gonzalez
Chair, IEEE/EAB Accreditation Policy Council

IEEE VIRTUAL MUSEUM PROGRAM CONTINUES TO THRIVE.

The IEEE Virtual Museum, the History Center's informal education site, has added still another exhibit to its "halls": Let's Get Small: The Shrinking World of Microelectronics examines the continued process of miniaturization throughout the 20th century. The museum also added another recognition to its long list of critical kudos, being a "Web Site Report" pick on Working Knowledge for Business Leaders, the on-line magazine of the Harvard Business School. Visit the Harvard Business School's report at <http://hbswk.hbs.edu/web-review.jhtml?id=4294&t=innovation>

Visit the new museum exhibit at <http://www.ieee-virtual-museum.org/exhibit/exhibit.php?id=159270&lid=1>

IEEE & THE SCOUTING MOVEMENT: WORKING TOGETHER TO ATTRACT STUDENTS TO IEEE AND THE ENGINEERING PROFESSION

IEEE Volunteers and Staff assembled a Peer Review Team, organized by Ralph W. Russell II, of Richmond, Va., USA-based company Dominion, lending their time and expertise to help the Boy Scouts of America (BSA) update their Electricity Merit Badge Pamphlet which had not been revised since 1996. Specifically, the team reviewed the electrical history, safety, terminology, and electrical experiments outlined in the pamphlet. Significant suggestions for improvement, corrections and updates were made. The listing of IEEE and the IEEE Virtual Museum were also added to the pamphlet as additional resources.

The EAB Pre-College Education Coordinating Committee became involved in the review process as a result of a formal partnership proposal submitted to the BSA this past April. The Electricity Merit Badge pamphlet review is the first BSA activity completed by the EAB committee. The IEEE TAB CPMT Society conducted the peer review process. When asked if this is an activity the group would engage in again, Russell said, "Yes. We were recently asked to do a peer review of the Computer Merit Badge as well." Discussions regarding the partnership between IEEE and the BSA will continue as it is still to be finalized. The IEEE also plans to work with the global World Organization of the Scout Movement and The World Association of Girl Guides and Girl Scouts to form partnerships.

To read the full article, please visit <http://www.ieee.org/organizations/eab/newswire.htm>

THREE MORE HISTORIC ACHIEVEMENTS EACH NAMED AS AN IEEE MILESTONE.

The IEEE History Center's program most closely geared to IEEE Sections is the Milestones in Electrical Engineering and Computing. A Section proposes a local achievement of significance, prepares a carefully

documented nomination, and, if approved by the IEEE History Committee and IEEE Executive Committee, dedicates a bronze plaque recognizing the honor. At their June 2004 meeting, the ExCom approved three more Milestones recommended by the History Committee, from three different Sections in three Regions, covering technologies from power to software almost 90 years of technology history. This brings the total number of new Milestones this year to seven, and the total in the program to more than 60. The newest additions are:

- 1) LEMPEL-ZIV DATA COMPRESSION ALGORITHM, 1977 (IEEE ISRAEL SECTION, R10)
- 2) CERN EXPERIMENTAL INSTRUMENTATION, 1968 (IEEE France Section, R8)
- 3) POWER SYSTEM OF BOSTON'S RAPID TRANSIT, 1889 (IEEE Boston Section, R1)

All three sections are planning fall dedication ceremonies. Visit http://www.ieee.org/organizations/history_center/milestones_program.html to learn more about the Milestones Program in general and also about these specific dedications as more information becomes available.

IEEE's "Today's Engineer" has been updated with new content, including:

- Backscatter: Picking a Winner. Deciding which technologies will be successful ? and how and when they will be incorporated into commercially viable products ? is a daunting challenge for corporations. They often call upon technology forecasting to help them "pick a winner." Just how accurate are such forecasts? <http://www.todaysengineer.org/aug04/backscatter.asp>
- Many Audiences, One Formula for Success. When creating a presentation, you need to focus first on developing your message and key points, paying special attention to your listeners' needs. Then you need to fit that message into a structure that will prompt the response you want. One simple, universal structure works well for all presentations, whether technical or non-technical, informative or persuasive. <http://www.todaysengineer.org/aug04/presentations.asp>
- IEEE-USA Pushes to Improve Tech Education for Kids. IEEE-USA is among several groups working closely with elementary, middle and high schools, getting students interested in math, science and technology, with the hope that they will encourage more youngsters to pursue engineering in college. Contests and mentoring programs are among the most popular tools, and many corporations are joining the effort, sponsoring the programs with money, time and people. <http://www.todaysengineer.org/aug04/K-12.asp>
- U.S. IEEE Member Inspires Congressional Action. The U.S. House of Representatives recently approved an appropriations bill that earmarks \$2 million for an independent study on the effects of offshore outsourcing. IEEE-USA Career and Workforce Policy Committee Chair Ron Hira had met earlier with Rep. Frank Wolf (R-Va.) to discuss offshoring and high-tech employment, prompting Wolf to add a provision to the FY 2005 Commerce, State and Justice Departments appropriations bill for an offshoring study. <http://www.todaysengineer.org/aug04/offshoring.asp>
- Does the IEEE's Code of Ethics Meet Today's Needs? The IEEE's Code of Ethics has retained the fundamental principles detailed in the Code first adopted by the American Institute of Electrical Engineers (AIEE) in 1912. Meanwhile, business practices have changed, society's needs have changed, and engineers' roles in business have changed. In light of the world in which we live and work today, could it be time to consider modifications? <http://www.todaysengineer.org/aug04/ethics.asp>

Also in this issue:

- Engineering in Pop Culture: Straphanger Centennial Part II
- World Bytes: At-Will Employment
- Reader Feedback

IEEE-USA MEDIA ALERT

"Ethics and Changing Energy Markets: Issues for Engineers, Managers and Regulators"
Organized by University of Notre Dame and Carnegie Mellon University
Sponsored by IEEE-USA, IEEE Power Engineering Society, ASCE and NSPE

WHAT: The conference will explore the interplay of ethical, market and regulatory issues arising in the shift from regulated to competitive markets in the electric and gas utility industries. News events involving energy markets, such as the California crisis and the Enron corporate disaster, have shaken public confidence in deregulated systems. Decisions of questionable ethical basis may have helped precipitate some of these calamities; adherence to high standards of ethics will be essential in restoring confidence in the markets. The origins of these problems and the best practices to avoid their repetition will be explored. Participants will debate the identification and resolution of ethical problems faced by energy industry participants from plant engineers to CFOs and CEOs.

WHO: Confirmed speakers include: Honorable Patrick Wood, chairman, Federal Energy Regulatory Commission; Vernon Smith, Nobel Laureate economist; Bethany McLean, "Fortune" magazine writer and co-author of "The Smartest Guys in the Room"; and leaders of the energy industry.

WHEN: Thursday-Friday, October 28-29, 2004

WHERE: University of Notre Dame, Notre Dame, Indiana

CONTACT: For more information and to register, go to <http://energyethics2004.nd.edu/>, or contact Roberta White, telephone (574) 631 8264. For a reproducible flyer on the conference, go to <http://www.ieeeusa.org/notable/energyethics2004.pdf>

Welcome to the ISEI 2004

The International Symposium on Electrical Insulation is sponsored by the IEEE Dielectrics and Electrical Insulation Society. The first IEEE International Symposium on Electrical Insulation was held in 1976 and was instituted as a biennial conference directed towards practical applications to complement the Electrical Insulation Conference (EIC), co-sponsored by IEEE and NEMA that is held in odd-numbered years.

In recent years the need has become apparent to re-emphasize the intent of ISEI to focus on the practical applications of electrical insulation. With this in mind ISEI 2000 was co-located with EASA (Electrical Apparatus Service Association) at its conference and exhibition in Anaheim, and ISEI 2002 was co-located with the Doble Client Conference in Boston where the focus was electric power utilities.

ISEI 2004 will be the fifteenth conference in the series and will be co-located with EME (Electrical Manufacturing Expo) at the Indiana Convention Center in Indianapolis, Indiana USA.

EIC has co-located on a biennial basis with EMCW (now EME) since 1979 and on these occasions the two organizations co-sponsor the exhibition.

ISEI 2004 will maintain its usual format, beginning on the evening of Sunday, September 19th with a reception and poster sessions at the Marriott Hotel adjacent to the convention center. Oral sessions will be held during the

day on Monday, Tuesday and Wednesday at the Indiana Convention Center, concluding around noon on the 22nd. The intent is to have approximately equal numbers of papers presented at oral and at poster sessions.

EME 2004 will be held September 20-22, 2004 with the exhibition being open from 16:00 to 20:00 h on the 20th and from 10:00 to 17:00 h on the 21st and 22nd. You are all cordially invited.

For more information, go to <http://www.deis.nrc.ca/isei2004.htm>

John W. Steadman
2004 IEEE-USA President
President's Column, July/August 2004

IEEE-USA recently joined with leading scientific, engineering and higher-education organizations in a statement to federal policymakers urging them to address problems with the nation's visa-processing system that are adversely affecting international scientific and technical collaborations.

The statement, in part, said: "We strongly support the federal government's efforts to establish new visa policies and procedures to bolster security; however, we believe that some of the new procedures and policies, along with a lack of sufficient resources, have made the visa-issuance process inefficient, lengthy and opaque. We are deeply concerned that this has led to a number of unintended consequences detrimental to science, higher education and the nation."

With heightened security following 9/11, the IEEE (and IEEE-USA) began receiving increased requests from non-U.S. IEEE members for assistance with problems traveling to and from the United States, including:

- Delays in visa processing that make it difficult for IEEE members abroad to participate in U.S.-based conferences.
- Denial of entry visas on various discretionary grounds, often without explanation or opportunity to appeal.
- Decisions by student members in the U.S. not to travel abroad to visit family or participate in international technical conferences because of concerns they might not be allowed to return to school.

These situations are affecting the IEEE's ability to function as a volunteer organization. They have created an incentive to move IEEE technical conferences and standards development activities out of the United States to facilitate international participation, with lost benefits to the U.S. economy. And most importantly, they are contributing to the increasing perception that our nation is a less-attractive destination for scientific and engineering training and research collaborations. This has negative implications for our country and its ability to remain technologically competitive in a global economy.

The General Accounting Office (GAO), at the request of Congress, investigated these problems and released a report earlier this year: <http://www.gao.gov/new.items/d04371.pdf>. The GAO confirmed significant processing delays because of various problems, including a lack of computer-system interoperability used by different federal agencies in the screening process. The GAO report, highlighted in a February hearing of the House Science Committee, recommended that "the Secretary of State, in coordination with the Director of the FBI and the Secretary of Homeland Security, develop and implement a plan to improve the security check process."

We hope these improvements will help increase our homeland security by eliminating incompatible systems and streamlining processes that consume limited resources without adding a discernible security benefit, and by providing visa screeners with the information they need on a timely basis to make informed judgments about scientific and technical visitors. In short, a more efficient system is a more secure system.

One concept not addressed in the statement, but now being discussed in Washington, is creation of a new special visa for foreign scientists and engineers of stature in the research community, who are employed in well-established international research activities, and who need to make multiple visits to the U.S. for that purpose.

A number of our members have asked me how this statement squares with IEEE-USA's position on the H-1B non-immigrant visa, which calls for limits and safeguards to ensure that temporary workers are paid prevailing wages and not used to displace U.S. high-tech workers. We view these as two distinct issues. The visa-processing statement relates to improvements needed in the systems for screening of non-immigrant scientific and technical visitors to the United States, such as non-U.S. members seeking to attend U.S.-based IEEE technical conferences. It would not affect the issuance of H-1B visas, or expand the number of H-1B workers permitted to enter the country for employment.

You can read the multi-society statement on-line at: <http://www.ieeeusa.org/forum/POLICY/2004/051204.pdf>

We welcome your feedback on the statement and on other proposals such as special visas for "trusted" scholars. We'd also like to hear about your own visa experiences as you travel in the U.S. and abroad. Send your comments to president@ieeeusa.org

IEEE-USA Wins International Public Relations Award

WASHINGTON (July 9, 2004) - IEEE-USA won first prize in the special event and observance category of the Golden World Awards for excellence in public relations, the International Public Relations Association (IPRA) announced in London on June 30. Top prizes went to 27 public-relations programs from 11 countries, out of 237 entries.

IEEE-USA was recognized for its planning, coordinating and fundraising activities in connection with the IEEE's lead society participation in National Engineers Week (EWeek) 2004, which included:

- Organizing a United Nations briefing on "Girls and Technology: New Educational Opportunities"
- Supporting three additional teams to compete in the national Future City Competition, which the IEEE launched in 1993 when it last led EWeek, as well as implementing a study of the Future City program's impact on participants to be used in fundraising
- Continuing the EWeek Family Day event that attracted more than 8,400 youngsters and adults to the National Building Museum in Washington to enjoy hands-on engineering activities
- Running ads in USA Today and the International Herald Tribune promoting diverse, new role models for engineers
- Producing an award-winning "12 New Faces of Engineering" calendar for underrepresented engineering students

The IEEE, with its corporate partner, the Fluor Corp., led a coalition of more than 70 engineering, education and cultural societies, and more than 50 corporations and U.S. government agencies in what the National Academy of Engineering considers the engineering profession's preeminent outreach effort. Founded in 1951 by the National Society of Professional Engineers, EWeek reaches thousands of schools, businesses and community groups in the United States.

An international jury of 44 senior public relations practitioners from 25 countries examined the entries for competence and quality. In addition to IEEE-USA, winners included such global PR firms as Burson-Marsteller, Weber Shandwick, Fleishman-Hillard Saunders, Ketchum and Edelman submitting entries on behalf of such multinational companies as American Express, Pfizer, Xerox, 3M and GlaxoSmithKline.

The IPRA Golden World Awards, now in its 14th year and sponsored by Dai Nippon Printing Co., Ltd., will be presented in London on October 21. IEEE-USA Public Relations Director Pender M. McCarter, an IPRA member, will accept the award on behalf of IEEE-USA and 2004 EWeek Chair Joseph V. Lillie. IEEE-USA received its first Golden World Award in 1991 for an advertising and public-relations campaign, "Winning With Technology," reinforcing IEEE-USA's legislative agenda of enhancing competitiveness at home and abroad.

IPRA is the premier association for senior international public relations professionals. For more information on the 2004 IPRA Golden World Awards, go to <http://www.ipra.org/services/gwa.htm>

IEEE-USA Testifies for Balance in Copyright Policy

WASHINGTON (July 22, 2004) - Copyright owners should not be permitted to restrict the development of technology having non-copyright-infringing uses, unless the developer actively and independently induces a copyright infringement, Andrew C. Greenberg testified before the Senate Judiciary Committee today.

Greenberg, vice-chair of the IEEE-USA Intellectual Property Committee (IPC) and an attorney with Carlton Fields, P.A. of Tampa, Fla., testified on the Inducing Infringement of Copyrights Act of 2004 (S.2560). IEEE-USA believes that neither the bill nor the status quo adequately balances the interests of those who create digital copyrighted content and those who create the technology to deliver, or otherwise make use of that content.

"We are mindful that new technologies may be misused to infringe a copyrighted work, and some will promote that to their own benefit," Greenberg testified. "At the same time, we are concerned that the Copyright Act must not be changed in ways that would inhibit research and development of novel technologies before their social value can be demonstrated."

IEEE-USA believes that it should not be an indirect infringement of a copyright to manufacture, distribute, or provide a hardware or software product or process capable of substantial non-infringing use, unless the manufacturer, distributor or maker actively induces the infringement of a copyrighted work by another.

"The challenge facing the Senate is to find a solution that allows the true copyright infringers to be dealt with in the legal system, while not restricting leading-edge technologies that might be used in making copies, both infringing and non-infringing," said Glenn Tenney, chair of IEEE-USA's IPC. "At the same time, non-infringing copying must be allowed to continue."

IEEE-USA, in the appendix of its written testimony, proposes substitute language for S.2560 to achieve these goals. For more information, go to <http://www.ieeeusa.org/forum/policy/2004/072204.html>.

High-Tech Employment Shrinks in Second Quarter, Despite Positive Signs on Unemployment Rates

WASHINGTON (July 26, 2004) - The number of employed computer professionals dropped from the first to second quarters, according to data compiled by the Department of Labor's Bureau of Labor Statistics (BLS). At the same time, high-tech unemployment rates also fell.

BLS reported a decline of 131,000 employed computer software engineers in the second quarter vs. the first quarter (725,000 vs. 856,000). Employed computer scientists and systems analysts have fallen 51,000 (621,000 vs. 672,000) during the same period, while computer hardware engineers dropped 3,000 (83,000 vs. 86,000). Computer programmers experienced a fall of 16,000 (575,000 vs. 591,000).

Bucking the trend, the number of employed electrical and electronics engineers (EEs) rose by 24,000 from the first to second quarters (351,000 vs. 327,000). The increase, however, is still below the 363,000 quarterly average in 2003.

"The EE employment figure is encouraging, and we're interested to see if the trend continues," IEEE-USA President John Steadman said. "But we're most concerned with our shrinking high-tech workforce, much of which is attributable to the offshoring of high-tech jobs."

BLS reported the EE unemployment rate, which stood at 5.3 percent in the first quarter, was 0.8 percent in the second quarter. While the increase in EE employment would indicate a falling unemployment rate, sampling errors could account for the substantial quarterly decrease, according to statistical consultant Richard Ellis of Ellis Research Services. A rate for computer hardware engineers wasn't reported because no one in this job classification among the survey population claimed to be unemployed last quarter.

The unemployment rate for computer software engineers fell from 3.3 percent in the first quarter to 2.9 percent in the second. For computer scientists and system analysts, the rate went from 6.7 percent to 4.0 percent; for computer programmers it fell from 9.5 percent to 5.7 percent.

"Sadly, part of the unemployment improvements might be because some technical professionals have become discouraged and are leaving the field," Steadman said.

IEEE's "The Institute" has been updated for August 2004 with new content, including:

- IEEE Honors Technology Innovators. This year's IEEE Honors Ceremony celebrated at least four milestones. For the first time, women received the IEEE Founders and John von Neumann medals, it was the 100th anniversary of the introduction of the IEEE Edison Medal, and the Eta Kappa Nu scholastic honor society, which counts many IEEE members among its ranks, reached its centennial year,
as well. Read more about the ceremony at http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2201&article=tionline/legacy/inst2004/aug04/8w.featurehonors.xml
- Web Site Helps Choose the Right Publications Package. Discover IEEE is a relatively new section of the IEEE Web site that helps you choose the best publications package for your needs from among the eight packages that the IEEE offers online. After you answer three questions about your intended use of the technical papers, Discover IEEE will provide you with a list of up to four possible choices. Find out more at http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2201&article=tionline/legacy/inst2004/aug04/8w.featurehonors.xml

- Grants Have Global Reach. In June, the IEEE Foundation awarded three grants totaling US\$36 950 for projects designed to provide engineers and engineering students across the world with information on the leading edge of technology. To read more about these projects in Brazil, Nigeria, and North Carolina, USA, visit http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2202&article=tionline/legacy/inst2004/aug04/8w.newsgrants.xml
- IEEE Foundation Receives US\$100 000 Bequest. IEEE Life Fellow and renowned power systems expert Charles Concordia bequeathed US\$100 000 to the IEEE Foundation after his death on 25 December 2003. Concordia, who was known as an engineers' engineer, wanted the funds to be invested in education to advance his profession through academic study. Read more about Concordia at http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2201&article=tionline/legacy/inst2004/aug04/8w.featurehonors.xml
- Conference Takes On Global Military Communications. The next generation of global military communications will capture most of the attention at this year's Military Communications Conference, better known as MILCOM. Sponsored by the IEEE Communications Society, the meeting will take place from October 31 to November 3 at the Monterey Conference Center in California, USA. Read more at http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2201&article=tionline/legacy/inst2004/aug04/8w.featurehonors.xml
- Proceedings from 2003 Military Communications Conference Now Available. The proceedings of last year's IEEE military communications conference address topics that include overcoming communications complexity, satellite communications, sensor and mobile networks, communications security, ultrawideband communications, and networking protocols. To purchase this publication, visit the IEEE Online Catalog & Store at <http://shop.ieee.org/store/product.asp?prodno=CH37500>
- Try IEEE Products and Services at Wescon. Visit the IEEE booth at Wescon 2004, being held from September 21-23 in Anaheim, Calif., USA. IEEE staff will be demonstrating the Member Digital Library, Standards Online, and more. The IEEE Press will also have a large selection of Wiley-IEEE books offered at a 20 percent conference discount. IEEE Sales and Marketing will give door prizes and gifts to those attending the demonstrations. For more information, visit <http://www.wescon.com>
- Call for Speakers at the 2005 IEEE Sections Congress. The IEEE Sections Congress 2005 Program Committee is accepting nominations for session speakers. The meeting is to be held October 14-17, 2005 in Tampa, Fla., USA. The theme of the event, "Promoting a World-Class Volunteer Community," will highlight three program tracks on membership, section operations, and relations between IEEE sections and internal and external organizations and the community. Submit nominations by 15 September. To nominate a speaker, visit <http://www.ieee.org/sc2005>.

The IEEE Cincinnati Section Executive Committee

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